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An Overview of the Lumber Industry in Canada, 2004 to 2010

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.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
p	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
E	use with caution
F	too unreliable to be published
*	significantly different from reference category ($p < 0.05$)

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An Overview of the Lumber Industry in Canada, 2004 to 2010

by Benoit Germain

1 Introduction

Forests cover approximately 397 million hectares of Canada's territory. This is more than twice the area of the province of Quebec and about 10% of the world's forest cover.[1] The potential for logging and associated products is huge. Indeed, Canada is one of the world's leading lumber producers.

In recent years, the Canadian lumber industry has experienced various pressures, such as declining demand in the United States and the softwood lumber dispute between Canada and the United States.

This study examines the relationship between the issues affecting the lumber industry and the fluctuation of a number of economic variables, including sales, production volume, employment, the number of operating sawmills, and exports. We will try to answer the following questions: How is the lumber industry faring on these issues? What has changed? What has not changed?

For consistency in the data, we will not consider the period prior to 2004. Between 2003 and 2004, there was a major change in the methodology of the Annual Survey of Manufactures and Logging (ASML). We believe that this created a break in the trends in the associated variables. In addition, data from this survey at the time of writing were available only up to 2009.

Section 2 outlines the main economic issues affecting the lumber industry; Section 3 presents an analysis of the changes in selected economic variables between 2004 and 2009; the final section focuses on 2010, which saw a resurgence of economic activity in the industry. Note that in this study, the lumber industry is generally taken to be the sawmill industry (except single and shake mills), unless otherwise indicated. See the note to readers for more information.

2 Economic issues

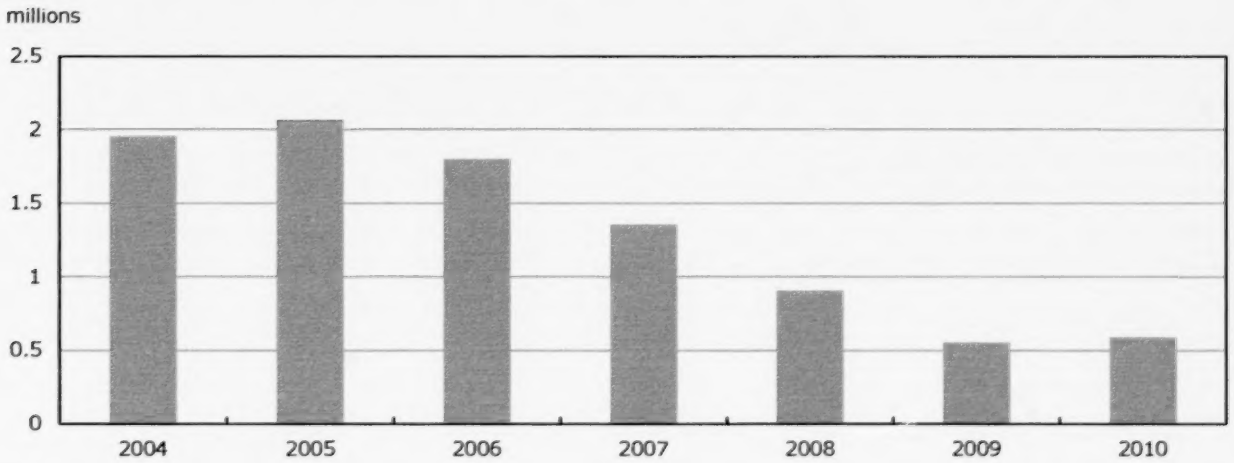
2.1 Lower demand in the United States

The United States is Canada's largest trading partner. A decline in U.S. demand generally affects Canadian exporting industries.

One way of measuring U.S. demand for Canadian softwood lumber is to look at the number of housing units started in the United States. Between 2004 and 2010, the number of private housing starts dropped from about 2.0 million to slightly less than 587,000, a decline of about 70%.

1. Natural Resources Canada, *The State of Canada's Forests*, 2011.

Chart 1
New privately owned housing units started in the United States, from 2004 to 2010



Source(s): U.S Census Bureau, Manufacturing, Mining, and Construction Statistics.

In 2009, the number of private housing starts was just 554,000 units, its lowest level in 50 years. Although a slight increase in 2005 is observed, this downward trend indicates that demand for Canadian lumber decreased substantially between 2004 and 2010.

2.2 Lumber dispute between the United States and Canada

In 2001, the U.S. Department of Commerce ruled that the stumpage fees the Canadian government was charging Canadian logging companies were too low. The United States subsequently imposed countervailing duties on Canadian exports.

In 2006, the two countries signed a new Softwood Lumber Agreement. Essentially, the agreement provided for the withdrawal of the export duties and the reimbursement of most of the duties collected from Canadian forestry companies since 2002.

In this context, we see greater diversification of the export markets for Canadian lumber. The proportion of exports to the U.S. market decreased considerably between 2004 and 2010. In 2004, 81.1% of all exports were destined for the U.S. market; by 2010, the proportion was 58.7%. However, there were other factors at play also, as we will see later.

3 The lumber industry: Recent trends, 2004–2009

In the context of the two issues mentioned above, the lumber industry's contribution to the Canadian economy has decreased steadily in recent years. In 2004, the industry's sales accounted for 2.9% of total manufacturing sales; by 2009, the proportion was about 1.2%.

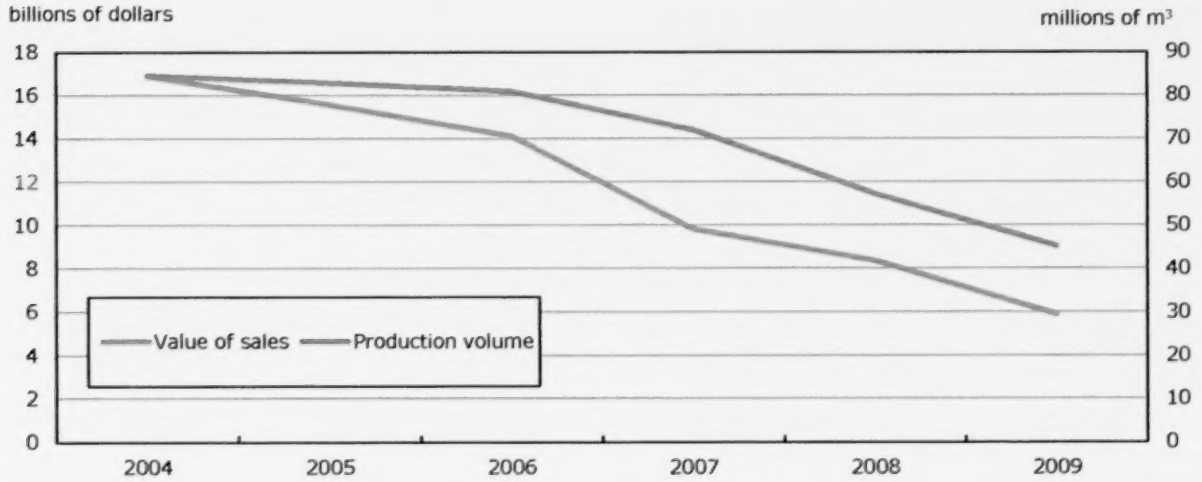
Even though its contribution may seem small, the industry is vital to some 200 rural communities, making up more than half their economies.[2] Forest products play a key role in the development of the more remote parts of Canada, including Aboriginal communities.

2. Natural Resources Canada, *The State of Canada's Forests*, 2011.

3.1 Sales and production volume

Between 2004 and 2009, the value of sales fell from $16.9 billion to $5.9 billion (-65.1%). Lumber production also declined during the same period, declining from 84.6 million cubic metres to 45.2 million cubic metres (-46.5%).

Chart 2
Sales and production volume were declining between 2004 and 2009

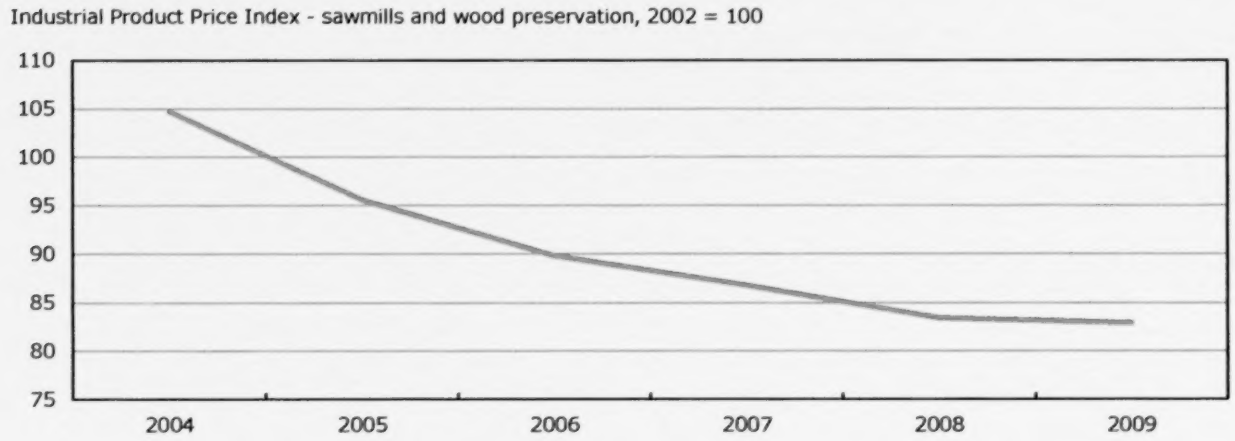


Source(s): Statistics Canada (Monthly Survey of Manufacturing ; sawn lumber production and shipments), CANSIM tables 304-0014 and 303-0009.

This decline in sales and production volume coincided with a decline in U.S. demand for lumber. As mentioned previously, the number of new privately owned housing units started was also decreasing during that period, except in 2005 (see Chart 1).

Between 2004 and 2006, the decline in sales can also be attributed to falling prices; production volume remained relatively stable, declining only 4.4% while prices dropped by 14.2%.

Chart 3
Prices decline



Source(s): Statistics Canada (Industrial Product Price Index), CANSIM table 329-0057.

3.2 Employment and the number of operating sawmills

The declines in sales and production volume are also reflected in the decreasing number of jobs in the lumber industry. While there are lumber industry jobs across Canada, they are most heavily concentrated in four provinces: British Columbia (40.8%), Quebec (29.5%), Alberta (10.1%) and Ontario (8.6%).[3]

Between 2004 and 2009, the number of direct and indirect jobs[4] across Canada dropped from 50,176 to 26,369 (-47.4%). In absolute terms, British Columbia was hardest hit, losing 9,494 direct and indirect jobs. Quebec and Ontario also suffered significant losses, as employment shrank by 6,795 (-46.6%) and 3,393 (-60.0%) respectively during the same period. In Alberta, the number of direct and indirect jobs declined somewhat less than the other three provinces, decreasing 1,124 (-29.7%) jobs between 2004 and 2009 (see table 1).

This widespread decline in employment was primarily due to the closure of many sawmills across Canada; the number of operating establishments decreased from 1,920 to 1,538 (-19.9%) between 2004 and 2009.

3 According to data from the 2009 Annual Survey of Manufactures.

4 Direct jobs are held by workers who are directly involved in the production of forest products, while indirect jobs are created by the activity in the forestry industry but are not in the industry itself (e.g., transportation of goods to other markets, purchase of intermediate products, capital investment). Source: Natural Resources Canada.

Table 1
Employment declined between 2004 and 2009

Years	Total	British-Columbia	Quebec	Ontario	Alberta
	number				
2004	**50,176**	20,240	14,574	5,652	3,786
2005	**48,856**	19,380	14,263	5,873	3,731
2006	**45,880**	19,065	12,709	5,635	3,319
2007	**38,869**	16,532	10,692	3,925	3,240
2008	**32,108**	13,461	9,018	3,030	3,187
2009	**26,369**	10,746	7,779	2,259	2,662

Of course, the lumber industry was not alone in suffering substantial employment losses in that period. Between 2004 and 2009, the manufacturing sector lost 357,000 jobs (-19.6%).

3.3 Exports

Between 2004 and 2009, the total value of exports of softwood lumber dropped from $11.9 billion to $4.2 billion (-64.8%). Over the same period, exports to the U.S. market fell from $9.6 billion to $2.6 billion (-72.7%), mirroring the slowdown in the American housing market.

Table 2
Significant decrease in exports between 2004 and 2009

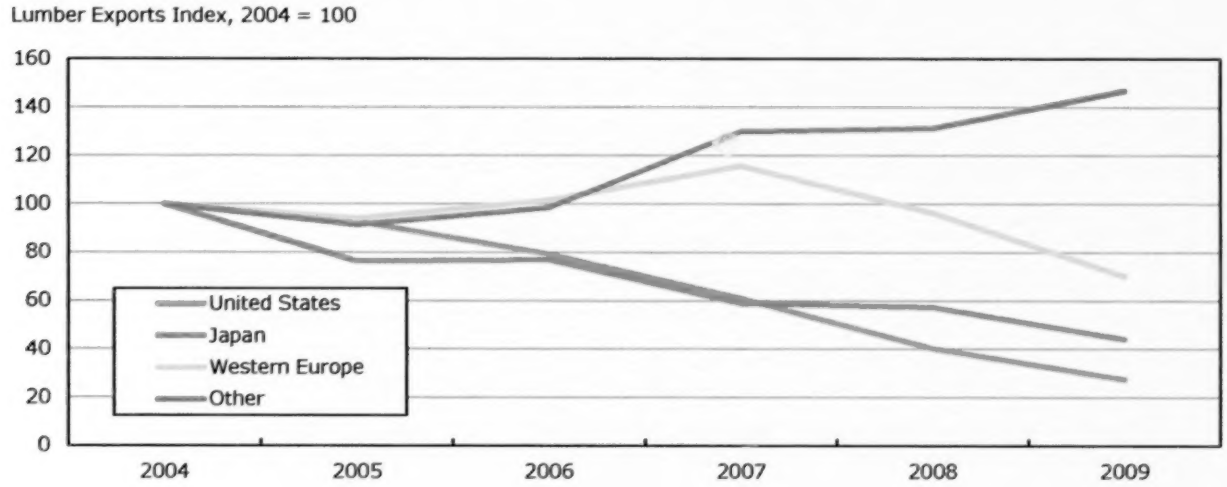
Years	Total	United Sates	Japan	Western Europe	Others
	millions of dollars				
2004	**11,891**	9,647	1,390	416	438
2005	**10,798**	8,947	1,059	391	400
2006	**9,564**	7,644	1,067	422	431
2007	**7,735**	5,868	817	482	569
2008	**5,647**	3,876	796	400	575
2009	**4,183**	2,638	611	292	643

The proportion of exports shipped to the United States has also decreased in recent years; 63.1% of lumber exports went to the U.S. market in 2009, compared with more than 80.0% in 2004.

As a result, the proportion of exports to countries other than the United States, Japan and Western Europe grew substantially, from just 3.7% in 2004 to 15.4% in 2009. China is among the countries consuming increasing volumes of Canadian lumber. In 2009, the value of exports to China was over $338 million, more than half of total exports to countries other than the United States, Japan and Western Europe.

We have created an index representing the variation in exports relative to 2004 in Chart 4. This demonstrates how the structure of export destinations has changed over time.

Chart 4
Exports of Canadian softwood lumber since 2004



Source(s): Statistics Canada (International Trade Division), special query via Industry Canada.

In 2009, the value of exports to other countries was nearly 1.5 times higher than in 2004, at about $643 million. Conversely, the value of exports to the United States was just 27.3% of what it was in 2004, a decline of more than $7.0 billion.

4 Signs of recovery in 2010

Despite the decreases between 2004 and 2009, the Canadian lumber industry showed signs of resurgence in 2010.

Between 2009 and 2010, sales rose from $5.9 billion to $7.4 billion (+25.9%), while production volume grew at a slightly slower rate, rising from 45.2 million cubic metres to 53.3 million cubic metres (+17.8%). These were the first gains since 2004.

Table 3
Upturn in sales and production volume in 2010

Years	Sales	Production
	millions of dollars	millions of cubic meters
2004	16,888	85
2005	15,567	83
2006	14,129	81
2007	9,831	72
2008	8,371	57
2009	5,895	45
2010	**7,420**	**53**

Employment of the industry[5] increased from 34,364 to 34,532 (+0.5%) in 2010. This increase in employment, though not entirely concentrated in the lumber industry, is certainly a positive sign for forestry workers. Lumber exports were also up in 2010, rising to $5.3 billion, 27.0% more than in 2009.

5 We are referring here to industry "Sawmills and wood preservation". See note annexed for more details.

Nevertheless, the proportion of lumber exports going to the U.S. market decreased to just 58.7% in 2010. In contrast, Canadian lumber exports to China have increased continuously, from less than 1.0% in 2004 to 13.2% in 2010. In 2010, the value of exports to China was almost equal to the value of exports to Japan. Moreover, some Canadian sawmills have started up again due to an increase of demand in Asia.[6]

5 Conclusion

The lumber industry experienced some major changes between 2004 and 2010. A number of economic indicators were falling until 2009 and then turned upward in 2010.

Sales, production volume, employment and exports all declined appreciably, in part because of shrinking demand for wood products in the United States. In 2010, however, the trend reversed itself, and the indicators moved higher.

In addition, the proportion of exports going to the U.S. market declined until 2010. However, exports to other countries, especially China, have increased substantially since 2004.

That change in the structure of lumber exports is due to a number of factors, including lower demand in the United States. This appears to be supported by the number of new privately owned housing units started between 2004 and 2010. It is also interesting to note that the fall in demand started well before the 2008 crisis.

6 Natural Resources Canada, "The State of Canada's Forests", 2011, p.43.

Appendix I — References

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Simard, Gilles, "*The Logging Industry: Supplying Sawmills and Pulp and Paper Plants*", Manufacturing, Construction and Energy Division, No 25F0002MIE in catalogue, December 1999.

U.S Census Bureau, Manufacturing, Mining, and Construction Statistics, *http://www.census.gov/const/www/newresconstindex.htm*, page consulted on May 31, 2011.

Appendix II — Note to Readers

Note to readers

The wood industry consists of three groups of establishments: those engaged in sawing logs into lumber and similar products or in preserving those products; those which make products that improve the natural characteristics of wood by manufacturing veneers, plywood, reconstituted wood panel products and engineered wood assemblies; and those which make a diverse range of wood products, such as millwork.

In this article, the lumber industry consists of sawmills, except shingle and shake mills (NAICS 321111). This Canadian industry comprises establishments primarily engaged in manufacturing boards, dimension lumber, timber, poles and ties, and siding, from logs and bolts.

The term "lumber" includes all first-stage wood products sawn from logs by sawmills. The lumber is then transformed into second-stage wood products such as doors and windows. Most lumber is produced from coniferous trees such as spruce, pine, fir and cedar, which make up the bulk of Canadian forests.

Appendix III — Data Sources

Data sources

Most of the data used in this article are from the CANSIM database.

The data on employment and the number of operating sawmills between 2004 and 2009 are from the Annual Survey of Manufactures and Logging (ASML). The survey covers all establishments primarily engaged in manufacturing and logging activities, as well as the sales offices and warehouses which support those establishments (table 301-0006).

The Survey of Employment, Payrolls and Hours (SEPH) provided the 2010 employment data, which apply to the sawmills and wood preservation industry (NAICS 3211). Since 2009 is the most recent year for which ASML data are available, we believe that the change in employment in the sawmills and wood preservation industry provides a good indication of the change in employment in the lumber industry. The survey's (SEPH) target population is composed of all employers in Canada, except those primarily involved in agriculture, fishing and trapping, private household services, religious organizations and military personnel of defence services. Its samples are drawn from the Business Register and from a list of all businesses registered in the Canada Revenue Agency's Business Number program with one or more active payroll deduction accounts. The SEPH is a census with a cross-sectional design. No sampling is done, as data are collected for all units of the target population (table 281-0024).

Sales are from the Monthly Survey of Manufacturing (MSM). The target population consists of incorporated and unincorporated establishments primarily engaged in manufacturing. The MSM is a sample survey with a cross-sectional design. Statistics Canada's Business Register has provided the sampling frame for the MSM since 1999 (table 304-0014).

Data on production volumes are from the monthly survey of sawn lumber production and shipments. The survey measures the volumes of lumber produced and shipped by Canadian manufacturers. It is a sample survey with a cross-sectional design. The sample consists of 275 of the largest sawmills in Canada, excluding Newfoundland and Prince Edward Island (table 303-0009).

The data on prices refer to the sawmills and wood preservation industry (NAICS 3211) and are taken from the Industrial Product Prices Index (IPPI). For the purposes of this article, we assume that lumber industry prices follow much the same trend as prices in the sawmills and wood preservation industry (table 329-0057).

The data on exports are from International Trade Division, but they were extracted by a special query submitted through Industry Canada's website.

Data on the number of new privately owned housing units started in the United States are from the U.S. Census Bureau and they can be found under this link: *http://www.census.gov/const/www/newresconstindex.htm*.